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ABSTRACT

This final report outlines objectives and accomplishments of the Environmental/Energy Education project in Florida. The project was initiated to: (1) identify existing environmental/energy education projects; (2) conduct a needs assessment workshop; (3) develop recommendations for the implementation of environmental education programs; and (4) establish a network for the exchange of information and the sharing of resources in environmental education. Program directors worked with educators as well as officials of public and private agencies concerned with environmental education. The needs assessment workshop report lists objectives, needs, implementation strategies and methods of information dissemination. Essentially, needs were determined relating to the necessity of man's understanding his environment. Recommendations stress the importance of the Title I program's work with the state. A directory inventories post-secondary environmental education resources in Florida. Information is included on the name of the resource facility, address, contact person, and a description on the nature of the center. Appendices list names and addresses of conference participants, county contacts, and Advisory Board Council Members. (KC)

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State: FLORIDA Project ID # 76-125-010

ED141259

TITLE I, HEA FINAL PROJECT REPORT
(For Use in Part C of the Annual Program Report)

1. Project Title: IDENTIFYING ENVIRONMENTAL EDUCATION NEEDS AND POST-SECONDARY EDUCATIONAL RESOURCES: A FLORIDA-WIDE COOPERATIVE NETWORK

2. Location of Project:

FLORIDA STATE UNIVERSITY
426 Hull Drive
Tallahassee, FL 32306

3. Primary Institution of Higher Education:

FLORIDA STATE UNIVERSITY

4. Cooperating Institutions of Higher Education:

Each of the Nine State Universities via the Environmental Education Coordinator appointed at each university

5. Project Director (Name, Title, and Address)

Rodney F. Allen , Associate Professor and Project Director
Science & Human Affairs Program
Florida State University
Tallahassee, FL 32306

6. Project Funds

A. Federal Funds (List amount used by each institution)

Total

Financial information has been removed by ERIC.

B. Matching Funds

(1) Institutional Funds (List contributing institutions and the amount)

(2) State Government Funds
(3) Local Government Funds
(4) Participant Fees
(5) Other (specify in each instance)

Total

SP010149

7. Identify the Community Problem

I. Categorize the project in terms of problem area. (check one)

____ Government	____ Crime/Law Enforcement
____ Housing	____ Health
____ Poverty	____ Economic Development
____ Transportation	____ Human Relations
XXXX Environmental Quality	____ Personal Development
____ Youth Opportunities	____ Education/School Systems
____ Recreation	____ Community Development
____ Employment	____ Land Use
	____ Other

II. Describe the community problem. The description need not be lengthy but should be specific and clearly stated.

Nature of Community Problem: Post-secondary educational institutions in Florida have the talent and resources to ameliorate many of the environmental education problems which exist. But, due to failure in communication or in programatic creativity, community needs are not being met in ways which fully utilize this talent and resources. This proposal suggests that a Florida-wide needs assessment network develop 1) an inventory of present and future environmental education needs for community-based groups and agencies and 2) an inventory of effective delivery systems for post-secondary educational institutions to meet those needs with community outreach programs. Such a study would involve a Florida-wide network of EE leaders in post-secondary education and the participation of those persons in #1, a-g, below.

8. Describe the Specific Objectives of the Project

The relationship of the objectives to the problem must be shown and the achievment of these objectives must be measurable.

1. Survey the perceptions of environmental education needs in Florida by personal interviews and mailed survey questionnaires. Target groups include:
   a) School system based science, social studies, and environmental education personnel;
   b) Community-based environmental centers: e.g., museum directors, wildlife-nature study centers, city and county parks;
   c) Local government leaders: e.g., mayors, city managers, local pollution control personnel, etc.;
   d) State and regional agencies: e.g., State Game and Fresh Water Fish Commission, State Forest Service, National Forest Service, Department of the Interior, etc.;
   e) Media personnel: e.g., television station reporters and newspaper environmental reporters, etc.
   f) Environmentally-concerned groups: e.g., Florida Audubon Society, State Federation of Garden Clubs, Sierra Club, etc.;
   g) Teacher educators in colleges and school systems, public and private.
2. Survey the goals, programs, and accomplishments of exemplary Title I

environmental projects in the nation, stressing the utilization of post-secondary education resources to meet specific continuing education needs.

3. Conduct a planning meeting of State consortium persons (15 State-project associates, DOE environmental education staff, post-secondary representatives to the State EE advisory council, and Project personnel). Establish a network among environmental education contact persons in post-secondary education institutions to communicate and exchange programatic information and to share resources (e.g., ideas, programatic materials, personnel talent, etc.)
4. Conduct an intensive two-day working conference on environmental education needs in Florida, programatic possibilities with post-secondary education institutions in Florida, and recommendations for action. Participants will include the groups and categories in #1, a to g.
5. Compile a report including the needs surveys, programatic possibilities, descriptions of exemplary programs, and specific recommendations, 200 copies to be distributed in Florida to continuing education groups and agencies. Copies available outside of Florida through the ERIC system at cost to those interested.
6. Conduct an evaluation based upon consortium members' responses, conference participants' responses, and outside reviews of the Project report.

9. Project Operations

I. What was the primary type of activity? (Check one)

___Course
___Conference
XX Workshop/Seminar
___Research
___Technical Assistance
___Counseling (Personal)
___Mass Media
___Radio
___T.V.
___Other
___Information Dissemination (i.e. publications, pamphlets, manuals)
___Other (Specify)

II. Describe the project content, method, and materials employed, the personnel involved, and where applicable, the frequency and duration of sessions.

The Project employed four conference/workshop programs and various correspondence and survey methods. Two conferences were held with community groups in Tallahassee and Sarasota, FL, focused upon a particular environmental education need. A Conference of university-based EE coordinators was held in the fall, 1976, followed by a State-wide conference in the Spring, 1977. These sessions were complemented by two programs designed specifically for teachers (held in Tallahassee and in West Palm Beach, FL).

Detailed materials on these activities may be found in the Appendix to this report.

10. Project Accomplishments

A. Evaluation

I. Discuss the nature and the findings of the project evaluation. Include an assessment of the projects success in meeting its specific objectives (see #8). In addition, comment on what you see as the reasons for the success or failure of the project. Did the project reach the anticipated target group? Was the level of participation as high as was projected? What outcome is most worthy of dissemination to other states and institutions of higher education?

The detailed project accomplishments are included in the reports that make up the Appendix. These reports will be disseminated in Florida by the project and by --perhaps--State agencies. The reports will be available to educators in other States via the ERIC System.

Two weakness of our effort involved surveying innovative delivery systems used by earlier State and National Title I projects. We were unable to get sufficient reports on these efforts to compile data and conclusions. It is our recommendation to Title I HEA officials that they require all projects to file reports with the ERIC System!

II. Will the program itself continue beyond this period of Title I funding? If so, under what sponsorship or support. (Check one)

____ Continued under Title I*	____ Accomplished purpose no further plans
____ Continued with other Federal funding	____ Unsuccessful, no further funding
XXXX Continued with non-Federal funds	____ Other (specify)

* List new project ID number(s):

10. Project Accomplishments (cont.)

B. Relative to Institution(s) of Higher Education

Indicate the impact of the project upon on-going program(s) of participating colleges and universities. Have changes occured, or are they anticipated, in the organization, curriculum, budget, community service program, or other aspects of the institutions(s)? Describe any planned or unexpected "spin-offs" involving additional funds or activities generated.

This project and future attempts at cooperation among the State University System regional coordinators for environmental education will enable a greater amount of university services to be directed toward environmental/energy education needs of children, youth, and adults in formal and non-formal educational setting. We are hoping to see greater use of non-formal education and more broadly-based delivery systems employed.

More effective use of the University System regional coordinators would be a powerful spin-off effect. We plan to work on this goal during the coming year. This continued progress would involve greater participation by community college personnel.

10. Project Accomplishments (cont.)

C. Relative to the Community. Specify the extent and the nature of the involvement in the project of community leaders, citizens, public and private agencies and State and local government. Were they, for example, involved in the initiation of the proposal and/or the planning and development of the project? Have any new community agencies, organizations, or groups been established as a result of this project? Has the community service capability of existing agencies and organizations been increased. If so, please describe:

Target audience for the results of this project:

1. post-secondary personnel who design EE and community outreach prorams (including Title I HEA):
2. continuing education personnel who allocate resources and plan programs in environmental education;
3. Florida vocational and adult education officials;
4. private and public groups and agencies who could turn to post-secondary institutions for environmental education programs; and
5. official boards of post-secondary educational institutions which make policy and allocate resources.

On four occasions where we worked intensly with community groups (on citizen participation skills in transportation planning and on energy education with teachers) those participants and their agencies emerged with skills, knowledge, and materials to better carry out their assigned functions.

For those agency and community group personnel who worked with us in identifying needs and resources, they have a better understanding of the needs "outOthere" and the resources available --and some ways to go about identifying needs and resources. They are now better able to serve their client/target groups. Hopefully, the documents produced will encourage additional post-secondary institutions to made additional resources available for environmental.energy education in Florida.

11. Geographic area served by the Project (check one)

____ Urban	____ Metropolitan	____ Suburban
____ Rural	XXXX Statewide	____ Other (specify)

12. Prior History of the Project (check one)

____ New Project	____ Expansion or improvement
XXXXXX Continuation of CSCE Project*	____ of a non-CSCE project
____ Revision of CSCE Project*	____ Other (specify)

* List previous project I.D. number(s):

13. Faculty Involvement (List the faculty members involved in the project, the nature of their activity, their academic discipline, and the percentage of their time spent on the project).

Faculty	Activity	Discipline	% of Time
R.F.Allen	Director	Science & Human Affairs Program	60% academic year 100% parts of summer
David E. LaHart	Research Associate	Science & Human Affairs	33 1/3% 12 months

* Various faculty members contributed time and talent when called upon to perform specific tasks. Due to the short period of time each served, it would be impossible to list percentage of time, etc.

14. Student Involvement (If applicable, indicate the nature of student involvement in the project as well as the number of students engaged in each activity)

A. Instructors
B. Interns
C. Consultants (Technical Assistance)
D. Researchers/Data Collectors
E. Other (Specify in each instance)

Activity	No. of Students
NONE	

15. Demographic Data

Demographic data on all actual participants should be collected and reported for each project. The data should be summarized in terms of sex, age, education and occupation. In addition a brief narrative of the general characteristics of the participants should be included (i.e. were they city councilmen, upper level managers, housewives, etc? Were they the group for whom the project was intended?)

I. Demographic Summary: PERSONS SERVED DIRECTLY(in-person) BY PROJECT ACTIVITIES

	Males 358	Females 396
A. Age		
Under 21:	10	20
21-35:	135	125
36-55:	190	175
Over 55:	23	76
B. Educational Level		
Elementary:	____	____
Junior High School:	____	____
High School:	____	____
College below baccalaureate:	8	21
Baccalaureate:	200	250
Graduate or Professional:	150	125
C. Occupational Classification	IMPOSSIBLE TO ESTIMATE(NO DATA COLLECTED)	
Professional:	____	____
Semi-Professional	____	____
Skilled:	____	____
Semi-Skilled:	____	____
Unskilled:	____	____
Other (specify):	____	____

II. Narrative Description:

Most of those served directly by this project were professionals in education, community groups/agencies, or in government or they were leaders in community organizations. They were the group for which the project was intended —as a direct service. Of course, the in-direct service, via reports and spin-off, would be a much larger group in a project of this nature.

16. Project Materials (Describe the materials produced for and by the project (i.e. curriculum materials, films, etc.) and indicate whether copies are available for dissemination).

LaHart, D.E. and R.F. Allen. Community Leaders' Training in Environmental Studies. Environmental Education Report. October 1976. Copies are available from the authors.

LaHart, D.E. and R.F. Allen. Identifying Goals for Post-Secondary Environmental Education in Florida. Accepted for publication in THE SANDSPUR, published by the Florida Audubon Society. The article will appear in the September, 1977 issue and will be available from the Florida Audubon Society.

* Allen, R.F. and D.E. LaHart (editors). A Directory of Post-Secondary Environmental Education Programs and Projects. Florida State University, College of Education, 1977.

* Allen, R.F. and D.E. LaHart. Identifying Post Secondary Environmental Needs and Implementation Strategies: A Conference Report. Florida State U.Col.ofEd. 1977

17. Express your judgement on the relationship of this project to the overall State program of Community Service and Continuing Education. (Title I HEA)

This project served as a coordinating mechanism for the identification of environmental projects in the State University System and the Community Colleges. The Project transended normal Continuing Education boundaries by serving as a facilitator for the interaction of all the Community Service and Continuing Education programs currently identified by the Board of Regents. By developing a Florida-wide cooperative network for post-secondary and community based environmental education projects and resources, Florida State University created a functional mechanism that the Department of Education and the Board of Regents will utilize in the future. This project provided the leadership and guidance necessary to assemble and coordinate environmental education in the post-secondary arena throughout Florida.

* Copies are available from ERIC Document Reproduction Service, P. O. Box 190, Arlington, Va. 22210

ENVIRONMENTAL/ENERGY EDUCATION NEEDS ASSESSMENT WORKSHOP CONFERENCE REPORT

EDITED BY:

DAVID E. LA HART
ROD ALLEN
ENVIRONMENTAL EDUCATION PROJECT
FLORIDA STATE UNIVERSITY
TALLAHASSEE, FLORIDA 32304

APRIL 14 - 15, 1977
COURT-OF-FLAGS MOTEL
ORLANDO, FLORIDA

FOREWORD

The conference described herein was convened by the Florida State University Environmental Education Project, with funds from the State Title I, HEA, Agency. Focusing upon environmental education and energy education needs among children, youth, and adults, the conference was so-sponsored by:

Board of Regents, HEA Title I State Agency
Environmental Education Project, Florida State University
Florida Energy Office, Florida Department of Administration
Office of Environmental Education, Florida Department of Education
Community Education Program, Florida Department of Education
Center for Continuing Education and Professional Development, Florida State University
Florida Wildlife Federation

Who was invited?

Community College Personnel, Community Educators, Museum and Environmental Center Directors, Government employees, business leaders and individuals involved in environmental and energy education.

What was the purpose?

1. *To develop specific recommendations to the Department of Education's Environmental Education Advisory Council to implement post-secondary and community environmental/energy education.*

2. *To identify esisting exemplary programs for possible use as Statewide models.*

3. *To conduct a needs assessment based on the unique perceptions of the various target groups.*

4. *To establish a Florida-wide network among functioning environmental and community educators to exchange information and to share resources.*

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INTRODUCTION

All that we can predict with certainty is that the central issue of the twenty-first century, as it is of this one, will be the struggle to assert truly human values and to achieve their ascendancy in a mass, technological society. It will be the struggle to place man in a healthy relationship with his natural environment; to place him in command of, rather than subservient to, the wondrous technology he is creating; and to give him the breadth and depth of understanding which can result in the formation of a world culture, embracing and nurturing within its transcending characteristics the diverse cultures of today's world.

--John Goodlad, Stanford University

In recent years, we have gradually become aware of a crisis in our relationship to the natural world which has assumed monumental proportions. The word "crisis" should not be applied glibly, for there are many forms of crisis. We may be conditioned to tune out all but the most critical, ignoring long-range forecasts to deal with the daily traumas of what to serve the boss and her husband tonight, or how to balance the checkbook in the face of mounting prices, or how to calm a boisterous class of eighth graders. Yet all the while, as Aldous Huxley reminds us, "The river of change flows ever faster, and somewhere downstream, perhaps only a few years ahead, we shall come to the rapids, and shall hear, louder and ever louder, the roaring of a catacact."

In the present century, man has fulfilled the Biblical injunction to "be fruitful and multiply and fill the earth," providing richer opportunities to more persons than ever before in history--yet also offering the possibility of dehumanization, alienation and deterioration of the quality of life to the same millions. As population has grown, demands upon the political, economic and natural systems have likewise increased. We need more houses, so we build ten per acre instead of four. We need more power, so we dam more rivers and strip the land for coal. We desire more luxuries, so we kill seals and alligators for soft fur coats and stunning shoes.

Groups press their demands-often conflicting demands-upon their public officials: Sheepmen want the right to destroy "predators" who kill their sheeep, but Audubon Society members insist that eagles be protected from human threats. Hikers and skiers petition for unspoiled, quiet natural areas, but snowmobilers insist on their right to recreation too. Travelers demand better airport facilities, but homeowners and environmental groups protest against the noise which such projects portend. Consumers will buy only clear, unmarked fruits and vegetables. Farmers comply by pouring on pesticides, only to face enraged outcries from biologists and farm workers alike. For every problem there is a solution, and for every solution a new problem seems to appear. All the while, we are expected to make continuous decisions, which may affect ourselves alone, or some of us, or all of us. Our decisions, and the values which lie behind them, are inextricably linked to the kind of world we will leave for future generations.

Lynn White, Jr., a medieval historian writing in Science, observed that:

> *What people do about their [environment] depends upon what they think about themselves in relation to things about them. Human ecology is deeply conditioned by beliefs about our nature and destiny--that is, by religion. To Western eyes this is very evident in, say, India or Ceylon. It is equally true of ourselves and of our medieval ancestors.*

If this is true, then we must be deeply concerned about the choices which confront us, the priorities which shape our decisions, the ways to go about the decision-making process, and the inclusiveness or exclusiveness of the process itself. As Richard M. Nixon pointed out in the first annual report of the Council on Environmental Quality:

> *We must seek nothing less than the basic reform in the way our society looks at problems and makes decisions. Our educational system has a key role in bringing about this reform ...It is also vital that our entire society develop a new understanding and a new awareness of man's relation to his environment --what might be called environmental literacy.*

In 1972, Charles E. Roth developed a description of the characteristics of a person who is "environmentally literate." While such a person may always remain an ideal, Roth's description in behavior terms breathes life into the goal of environmental literacy.*

"An environmentally literate citizen:

1. should be able to recognize environmental problems when they arise. This means he must acquire a basic understanding of the fundamental inter-relationships among men and the bio-geochemical environments. Without such understanding, he cannot perceive potential breakdowns in the system resulting from technologies and population density-dependent factors - breakdowns that reduce the quality of life and which could ultimately affect the ability of the biosphere to sustain life.
2. must think before acting, examining as many facets of an environmental issue as possible before taking his action position.
3. rejects short-term gain when they threaten long-range benefits. He recognizes that environmental problems are easier to prevent or arrest than to reverse.
4. takes action to correct environmental imbalances through such approaches as:

*Charles E. Roth and Miriam E. Dickey, Beyond the Classroom: Using the Urban Environment as an Instructional Medium (Lincoln, Massachusetts: Massachusetts Audubon Society, 1972).

a. altering his consumer and work practices to make them ecologically sound
b. expressing his concerns and opinions to appropriate officials
c. suggesting and/or writing and supporting appropriate legislation
d. initiating and/or participating in group action and encouraging others to identify and take action on environmental issues
e. supporting appropriate organizations with time and/or money

5. continues to gather information about environmental issues throughout his life, recognizing that knowledge and skills once acquired cannot be expected to serve a lifetime in our rapidly changing world: yesterday's solutions may not fit today's problems.
6. is humane — that is, recognizing the ecological inter relationships of all living things, he extends the concepts of humaneness to all life, striving for reduction to a minimum of cruelty and callousness to all living things.
7. must treat public property and the private property of others with the same respect and stewardship he extends to his own most revered property.
8. has a keen sense of stewardship, maintaining and improving the ability of his home area to sustain and enhance the quality of life. He recognizes a need to use the environment fully, but also an obligation to pass it on to the future with as little damage and as much improvement as possible.
9. demonstrates a willingness to curtail some individual privileges and even rights to certain resources for the long-range public good.
10. consciously limits the size of the family he engenders consistent with the limited resources of the biosphere.
11. works to maintain diversity in the total environment - both natural and man-made.
12. is continually examining and re-examining the values of his culture in terms of new knowledge about man and his resources. He then seeks to change values and assumptions that are creating man-environment interactions disruptive to optimum development of human potential and the integrity of the ecosystem."

Education for Environmental Literacy

Plants and animals are naturally attuned to survive in their environment. However, human beings as a cultural-animal must learn their proper place and function, or perish. Humans cannot rely upon natural pre-programming. We must experience and learn from those experiences; testing and changing the beliefs and values which we received from our culture.

If environmental education is to be more than a communal tear shed over pollution and if environmental studies is to be more than life-cycle diagrams, the experiences must serve as springboards to personal meaning, commitment, and action. Environmental education here is broadly perceived as education in the

sense of "to bring forth"....its Latin root. To bring forth powerful stimuli for developing a person's process of inquiry, imagination, feelings, and value commitments which lead to effective social participation.

major objectives for environmental education may be spelled out in the following categories:

AWARENESS

To help individuals and groups become aware of their feelings, beliefs, and values/attitudes about their natural and social environments.

KNOWLEDGE

To help individuals and groups acquire a basic understanding of the web of environmental relationships, including the impact of human behavior upon that web.

VALUES/ATTITUDES

To help individuals and groups acquire social values of responsibility and the creative imagination needed to make decisions which are sensitive to the web of natural and human relationships.

SKILLS

To help individuals and groups acquire the skills needed for searching out personal meaning, acquiring new knowledge, making rational decisions, and participating in the civic-social life of their communities.

ACTION

To help individuals and groups develop a sense of community obligation and to learn the skills necessary for effective political participation and social action.

EVALUATION ABILITIES

To help individuals and groups evaluate the impact of their decisions and actions and the policy proposals of others, in terms of social and environmental justice.

To this list of major objectives, we might well add "vocational/career abilities." Today, jobs are open in the environmental field and the need for professional and sub-professional workers is increasing.

To this whole introduction we might substitute the word <u>energy</u> for environment and the message would be the same. Energy education needs are experienced by children, youth, and adults, and the categories of objectives are similar. For our perspective, ENERGY EDUCATION is a component of ENVIRONMENTAL EDUCATION. Thus, for us it is unnesessary to switch words or to add phrases. We always mean Environmental/Energy Education. After all, the environment is organized by energy flow!

CONFERENCE PROGRAM

The conference opened on Thursday, April 14, 1977, and continued through Friday, April 15, 1977, at noon.

THURSDAY

9:30 AM	Registration and Coffee
10:00	Welcome: C. Richard Tillis, Director Office of Environmental Education and Carlos Warren, Director Florida Energy Office
10:30	Review of Workshop Objectives Rodney Allen, Director Environmental Education Project Florida State University
11:00	The Status of Environmental/Energy Education in Florida C. Richard Tillis Rosalyn B. Tillis, Florida Energy Office
11:30	Environmental/Energy Goal Identification/Inventory
12:30 PM	Sandwich bar luncheon Speaker: George Lowe, Staff Director Citizen Education Program, Office of the Commissioner of Education
1:30	Florida Community Education Program Julian Morse, Director Community Education Program
1:30	Discussion
2:00	Break into area groups Tasks: Discussion of Current Programs in Florida Initial identification of community needs

GROUP A	Post Secondary Institutions Scott Dailey
GROUP B	Museum and Center Directors William Hammond
GROUP C	Public and Community Educators David LaHart
4:00 PM	AREA GROUP REPORTS A) Current Programs B) Needs

FRIDAY

9:00 AM	Identifying Targets for Post Secondary Environmental/Energy Education Peter Butzin, Common Cause Carlos Warren, Florida Energy Office Rod Allen, Florida State University
9:45	Resource Identification/Inventory
10:15	Coffee
10:45	BREAK INTO AREA GROUPS A. Post Secondary Institutions B. Museum and Center Directors C. Public and Private Community Educ. Tasks 1. Identifying Communication Problems 2. Solving Communication Problems 3. Establishing a Florida Network
12:00	GROUP REPORTS WORKSHOP EVALUATION

CURRENT PROGRAMS: WHAT'S GOING ON?

One way to discern what some persons and groups think that environmental/energy needs are is to find out what they are doing now! Florida schools (K-12) have a long history of instruction for environmental education and they are rapidly engaging in energy education. Pasco County and Palm Beach County have, for example, substantial investments of personnel and other resources in energy education for teachers and students. The new energy community schools program and the voc-tech centers are offering more and more programs for adults as citizens and as workers in the environmental and energy fields.

Florida also has a long tradition of community-based education--local museums, nature centers, etc.--where environmental education takes place for all age groups. The Pine Jog Environmental Center, Cockroach Bay Center, and the Tallahassee Junior Museum are but three of the many facilities receiving broad community support and participation. Most of these centers are moving to provide community education on energy topics and issues, complementing their environmental education activities.

State and Federal agencies in Florida--ranging from the State Energy Office and the Office of Environmental Education to YCC programs, to the Game and Fresh Water Fish Commission, to the Department of Natural Resources and the National Park Service--are heavily engaged in fostering and conducting environmental education programs for a variety of age groups. Their concerns range from public lands preservation, to employment skills, to public awareness and environmental protection and energy conservation.

Community colleges and universities have shown a mixed commitment to environmental and energy education. Some community colleges have offered forerunning programs, such as courses at Miami-Dade Community College and the Environmental Media Program (funded under Title I HEA) at Santa Fe Community College. Others have conducted public awareness programs, such as the Title I Project LEAC at Hillsborough Community College in Tampa. Most of the State's universities have some environmental education programs. Many are directed to research or to the internal communities. The University of West Florida's nature facilities and programs for teachers is one type of program. The University of North Florida conducts similar endeavors. The University of South Florida works directly with school systems--both teachers and students--in sharing facilities, planning conferences, and offering an array of courses and consulting services. The University of Florida provides many programs from the TREEO Center, training sewer plant workers, to the energy research and education efforts of two energy projects. Florida Atlantic University in connection with the Pine Jog Center offers direct school services and adult education programming across environmental and energy education concerns. Florida International University has an adult education focus with innovative programs coming from the Joint Center and from the Office of Continuing Education. These programs range from citizen/elected official environmental programs to camping (live-in) experiences with low-energy lifestyles. Florida State University with its Environmental Inventory and Analysis Center and the Environmental Education Project offer a wide range of services to adult community groups, to State agencies and to School-based educators.

Two things are clear in Florida: 1) the officials and people of the State are committed to a quality environment, and 2) that they are committed to quality environmental education programs for all sectors of the population.

While public awareness is still a concern on environmental and energy issues, there is ample evidence that "awareness" alone is no longer perceived as an adequate goal for educational programming. Awareness goals need to be complemented by hard knowledge, value development, public issues resolution, and, often, skills for political participation and for employment.

However, as hard as environmental/energy educators labor at their profession, it is clear that they are not attaining the high goals which they set for their efforts. They want to do more and to do it better! This conference was built upon that gap between educators' sense of performance and ideals--to explore ways to identify specific needs and to list desired implementation strategies.

Goal Identification

A major portion of the Project's efforts during 1976-77 included the development of an assessment instrument that would clearly define post-secondary environmental education needs in Florida. Research involved in developing this instrument resulted in the selection of an assessment tool that consisted of two scales. One scale attempted to determine how much emphasis is being placed on a particular goal. The second scale determined how much emphasis should be placed on that goal. The difference between the is scale and the should be scale represented the respondents assessment of needs.

An example question is:

To encourage the growth of educational programs at existing nature and science centers in our community.	0	1	2	3	4	5	0	1	2	3	4	5

The goals included on the opinionaire were field-tested on a panel of experts before the instrument was used for the purposes of this project. As a result of this field-test, many of the goals were rewritten or revised with clarifying language. Obviously there is a considerable over-lap in many of the goals but the respondents were easily able to isolate those goals they felt were most important.

The Test Populations

The needs assessment was conducted at a Project-sponsored workshop in Orlando, April 14 and 15, 1977. About 50 persons, who are actively involved with post-secondary and community-based environmental education programs took part in the needs assessment. The instrument divided the group into four sub-populations according to the respondents primary work emphasis. The four sub-populations included:

K-12	Community College University	Community Based Education	Other (specify)

Persons who identified themselves as "other" were employees of state agencies (N = 3) and for the purpose of data analysis they were included as Community Educators.

Over half of the respondents (N = 19) identified themselves as dealing primarily with K-12. To make data analysis possible, the Community College/ University population (N=8) was combined with the Community Education population (N=4) yielding two sub-populations. One sub-population was primarily involved in K-12 education while the other sub-population was primarily involved in post-secondary education.

Data Analysis

Data for both sub-populations was analyzed using the differences between the is and the should be scales. The sum of the differences for each sub-population for each goal were then rank-ordered.

Correlation analysis was done using a Spearman Rank Correlation Coefficient (r_s) This statistic, sometimes called rho, is a non-parametric measure of association of objects (needs for goals) ranked in two ordered series. Data analysis in this study produced an r_s of .42 as rho (1.0 indicated perfect correlation). This result is best described as a "grey" statistic; it indicates that some correlation between the two sub-populations does exist but strong correlation is not apparent.

Results:

Participant identified needs in rank order are:

1. To encourage individuals to be aware of how a person's work is effected by the environment and vice-versa.

2. To encourage individuals to understand how technology can alter the physical and natural environment.

3. To promote a knowledge of, and interest in science as it pertains to the environment.

4. To encourage individuals to understand that the quality of man's life depends upon the harmony he achieves with his natural and social environment.

5. To help individuals develop the necessary thinking and behavioral skills for the prevention of environmental degredation, the correction of environmental abuses, and alteration and use of natural resources to enhance the function and quality of the environment, to meet ecological and human needs.

6. To promote total community involvement in the identification and solution of local environmental problems.

7. To promote research which will provide local groups, organizations and students with assistance in solving local environmental problems.

8. To help individuals acquire strong feelings fundamental to developing a concern for the environment and a motivation to participate in activities for maintaining and improving environmental quality.

9. To encourage environmentally literate citizens who believe that learning does not end with formal schooling and that we can gather and process environmental information throughout our life.

10. To help individuals acquire basic understandings of the total natural & man-made environment, their relationship with the environment and common environmental problems.

Conclusions

While there appears to be some conflict between environmental educators working with K-12 and those primarily involved with post-secondary environmental education over needs, the conflict is more imaginary than real. Perhaps the most dramatic proof of this can be provided by the *is* column in the assessment instrument. There were obvious significant differences between the two sub-populations in their perceptions of what *is* happening in post-secondary environmental education. This difference in knowledge of what is happening accounts for the differences in participant identified goals.

The first four ranked goals obviously relate to the broad area of environment-economics-society interactions. Surprisingly, a renewed interest in science was identified as having a higher priority than a similar, interdisciplinary goal (number 10).

A large number of the need goals identified citizen skills and participations techniques in environmental planning as being desirable. Perhaps the emergence of the "citizen" as a major force in environmental programs dealing with water quality and energy has produced a percieved need for better intellectual tools to cope with and change the bureaucracies that regulate our lives.

After the formal questionnaire regarding Goals, the participants identified Goals that they felt were not included in the formal instrument or were not prominant enough. These participant identified goals include:

--to promote understanding of the economics of resource management

--to improve citizen skills and techniques for participation in political decision making.

--to help individuals learn the basic skills of group motivation to effect changes in environmental and social systems

--to promote practical knowledge of both semi-infinite (ex water) and finite (ex fossil fuels) resource systems including their unique rates of human consumption.

--to promote community awareness that extensive use of certain energy sources may produce large environmental impacts.

--to encourage citizens to examine their own value structure in determining the delicate balance between personal energy demands and the public trade-offs in environmental pollution.

--to strengthen pre-service teacher education with environmental/energy studies

--to develop distinctive programs to strengthen teaching/learning about environmental/energy matters in all facets of formal and non-formal educative systems

Committee Identified Needs

K-12 Committee:

...need to know: state conferences, dissemination mini-grant materials, and a clearinghouse.

...greater coordination between citizen groups and school efforts--when citizens support schools, both benefit.

...deliver information to the right people--supplies to country office don't reach teachers until it is outdated (guidance for county coordinators?)

...Inservice teacher training in environmental energy education. Specific workshop on how to infuse environmental/energy education into the existing curriculum. Let the teachers who are doing tell how they are doing.

...disseminate the recently passed State Energy Policy

...field coordination between energy REAC teams and school districts down to level of the classroom teacher. What energy experts are available to the schools/teachers?

...community oriented workshops on retrofitting (work with voc tech) and building trades.

Museum and Center Directors:

...that attention for outside funding should be directed at subversive strategies within the community. A conference or publication on subversive funding strategies would be most useful.

...developing access routes to and through the community which generate utilization of community resources for program development and implementation.

...development of arts, multi-media programs with a regional interest. Development of interdisciplinary watershed models including history, arts ecolcgical basis. A foxfire approach to environmental/energy education.

...present programs should include mini-grant funds which stretch tax dollars by forcing people to use additional community resources.

...the development of a holistic earth ethic with a sense of place and a positive orientation to the future.

University and Community College Group:

...include environmental/energy education in newly emerging educational concerns within the society (e.g., parenting education, humane education, citizen education, bi-lingual education, early childhood education, educational opportunities for the handicapped).

...develop multi-faceted programs to deliver knowledge and skills related to environmental/energy issues to all socio-cultural levels of citizens in the State, using formal and non-formal educational delivery systems.

...coordinate educational information and resources in a Comprehensive Environmental/Energy Education Clearinghouse/Coordination Center

...build programs which foster reflection and reassessment of current life-styles and conceptions of self-interest

...meet land-use and growth concerns, especially helping persons resolve the conflicts between economic needs/interests and environmental/preservation interests. This involves an examination of the trade-offs involved in such decisions.

...meet concerns over private/public land ownership, coastal zone management

...sample and address the needs and concerns of senior citizen groups in energy/environmental issues

Implementation Strategies

Goal identification and needs assessment represent a point-in-time evaluation of where a particular program is and where it should be going. The Project staff felt the needs assessment was only part of the solution.

A separate instrument was developed to measure the participants perceptions of what implementation strategies currently are and what implementation strategies should be. The instrument was similar to the one designed to assess the goals and was developed using the same criteria.

Statistical analysis using the Spearman Correlation Coefficient indicated a very high degree (r_s = .91) of correlation. Despite the apparent difference between the K-12 educators and the post-secondary educators over goals, there was little difference between the two populations over implementation strategies.

Results:

Participant identified implementation strategies in rank order:

1. To develop a comprehensive local environmental education plan.
2. To develop an environmental awareness in the total community population.
3. To involve youth and other members of the community in the implementation of action programs to improve the environment.
4. To train adult leaders of youth organizations to work with youth in the implementation of environmental/energy programs.
5. To provide a community environmental resource center of information and assistance, which will provide materials, speakers, resource people and information on the local environment.
6. To develop regional university environmental study centers.
7. To sponsor workshops for all members of the community to learn about, discuss and act upon relevant environmental problems.
8. To provide an extensive series of environmental projects for members of the community.
9. To concentrate environmental education efforts on immediate and local problems; specifically, energy, farming, forestry and land-use planning.
10. To provide one main outdoor environmental classroom for use by school students and the community.

Conclusions

The participant identified implementation strategies deal with community-oriented environmental education in the broadest sense. Interestingly, only one strategy (10) deals with environmental education in the K-12 system, yet the participants had the option of choosing 3 strategies involving K-12.

Strategies 5 and 6 both deal with the idea of centers--one community based and one university based. Perhaps both these strategies might be accomplished by designating universities as Regional Centers and funding programs through the respective divisions of Continuing Education.

The rank of goals and implementation strategies by persons actively involved in post-secondary environmental education provides a unique, inside look for policy makers concerned with environmental programs in Florida. The Florida State approach assumed that the knowledge and priorities were <u>out there</u> and the practitioners should provide considerable input on scope and direction for program planning. These goals and strategies are their suggestions.

Committee Notes on Implementation Strategies:

...recommended that the environmental/energy office develop a communicative network to announce up-coming workshops, materials and ideas in all related areas.

...recommend a current state inventory of environmental/energy centers organizations and offices.

...recommend a specific environmental/energy education advisory council for each school district (tie to mini-grant funding)

...recommend inservice teacher credit courses in environmental/energy education via video tape to provide inservice training in environmental/energy education methods and subject matter in cooperation with existing educational institutions (eg. WFSU-TV).

...recommend an environmental/energy education fair that would highlight the most innovative and promising projects.

...recommend exploring the development of methods to address pre-service on energy/environmental teaching competencies.

Notes from the Higher Education Committee:

...Greatest need is to continue to communicate among us--Yearly conferences are ideal if they are well organized and provide for maximum interaction time.

...There may be a need for regional environmental/energy centers that can function as clearinghouse and source of experts both in content and education.

...The notion of the energy extension service is excellent, but we question its location in the State University System because of high overhead costs (not enough of the money goes directly to provide the services).

...Perhaps there is a need for Florida Association of Environmental Educators that are actively involved in environmental/energy education and willing to pay for the services of a new organization (could affiliate with existing groups of science teachers/social studies teachers).

...Religion is still an untapped resource for the earth ethic; eleventh commandment: "Thou shall not abuse my gift: your world."

Notes from Community Based Educators
Mechanisms for Dissemination:

Newsletters: develop a list of all newsletters in state and when you have news, mail it to all editors; develop this list and mail it to all editors so information can be exchanged.
Example: FAU Community Education Bulletin--Environmental Education personnel can submit information to the paper and it will be published in the next newsletter. Volusia County works with Economic Education Council via a system of dissemination through University system. Leon County has a community and K-12 based environmental education Council and a school Environmental Education contact. Everybody gets minutes of advisory council meetings. Indian River County works well with the Audubon Society to get information to the schools.

Current State Wide Newsletters:

Florida Atlantic University--UpDate
Florida Audubon Society - Sandspur
Environmental Education Reporter--Updates Department of Education Office of Environmental Education activities.
Florida Out-of-Doors - Publishes articles on Environmental Education and monthly column on energy education tips.
Department of Environmental Regulations Newsletter
Department of Natural Resources "Conservation News"
Game and Fish Commission's "Florida Wildlife Magazine"

Other possible vehicles:

Florida Community Education Association
Florida Adult Educators
Florida Council for the Social Studies--Trends
Florida Association of Science Teachers
DOE calendar published quarterly gives information of conferences

Other Methods of Communication

Radio and television--Jack Binns in DOE eager to have programs about education
Public service announcements on TV--can use to announce meetings
Get station to include slide of your program announcement when announcing station break.
Newspaper articles: Important to develop a working relation with member of the press corps--not just spot announcements but gradually build up community interest in activities and programs.
Billboard space might be available if the billboard is not rented
Developing a telephone network for immediate action
Do we need a new organization of avant-garde educators?
Florida Association of Educating for.....?

RECOMMENDATIONS

The Project staff makes the following recommendations:

1. That the Title I HEA State Office maintain its environmental/energy education priority for funding programs, and that environmental/energy educators support the continued funding of such projects and urge post-secondary institutions in Florida to design and conduct ever more effective educational outreach programs.

   The purpose of the Title I HEA Community Service and Continuing Education Program is to resolve community problems by applying the resources of post-secondary ("higher") education to the problem through educational and service outreach programs. The importance of this primary goal was reinforced during the national evaluation of Title I HEA conducted by the National Advisory Council on Extension and Continuing Education (1975). However, Title I has a dual thrust. Writing in The Community Service Catalyst (Fall, 1971), Leonard Oliver maintained that:

   > Title I's basic objective is to solve community problems, but this objective can best be fulfilled under the program by strengthening the community service programs of colleges and universities. These thrusts are reciprocal and mutually reinforcing and should not be isolated from each other.

2. That Title I, in concert with the Florida Office of Environmental Education and the State Energy Office, work to further the establishment of a cooperative network among the State Universities, building upon the appointed regional coordinators of environmental education which is now in existence.

3. That Title I in concert with State and federal agencies in Florida, work to establish a Statewide clearing house on Environmental/Energy education, with (perhaps) regional centers throughout the State. The Florida Council for Economic Education offers <u>one</u> model with increasing effectiveness.

4. That Title I and State agencies encourage reflection upon environmental/energy goals and ever more effective ways to identify broad community needs.

5. That the Florida Energy Office circulate its Master Plan for Energy Education in concert with the Florida Office of Environmental Education's Master Plan for Environmental Education, enlisting the support of educators, school and non-school, formal and non-formal, and enlisting the support and action of broad-based community organizations.

<u>Colleges and Universities</u>

Universities and colleges can play important roles in environmental education. The university engages in basic research; it supports elementary and secondary education; it engages in vocational training; it provides undergraduate instruction, professional education, and advanced scientific training, formal adult education, informal education through educational television, and extension courses. Because of the interdisciplinary nature of environmental education, it should be related to all these levels of endeavor.

Perhaps the most important roles the colleges and universities can play in the overall environmental education program are in providing:

a) undergraduate education seminars that utilize interdisciplinary approaches to environmental studies;
b) preservice and in-service teacher education;
c) manpower training for sub-professional roles in environmental management.

1. Pre-service teacher education courses should provide exposure to interdisciplinary environmental education. Each teacher education institution should adapt environmental education into all methods courses within its teacher training programs. State Council on Teacher Education should assist in developing a system for Department of Education approval of programs.

2. A university coordinator should be appointed for each state university. These coordinators should be adequately compensated for one-fourth of their time. The responsibilities of the university coordinators include:

   a) Coordinate environmental education efforts within university service region.
   b) Serve as liason with Teacher Education Training programs for the local school districts and/or teacher training centers within the service region.
   c) Encourage credit, non-credit, and inservice training courses in environmental studies within the region.
   d) Assist in conducting the annual environmental manpower study by providing data needed from the institution.
   e) Plan or assist in planning conferences in the university service regions.
   f) Visit and assist local school districts when invited or when feasible.
   g) Submit bi-annual report of environmental education activities within the region to the Office of Environmental Education, Department of Education.

3. Exemplary environmental education program funds (mini-grants) should be made available to institutions of higher education. These should be administered in the same manner as the K-12 mini-grant program, but should be a separate and additional grant program appropriated on its own merit.

A DIRECTORY OF FLORIDA'S POST SECONDARY ENVIRONMENTAL EDUCATION PROJECTS

COMPILED BY:
ENVIRONMENTAL EDUCATION PROJECT
FLORIDA STATE UNIVERSITY
TALLAHASSEE, FLORIDA 32306
JUNE 1977

RALPH D. TURLINGTON
COMMISSIONER

STATE OF FLORIDA
DEPARTMENT OF EDUCATION

TALLAHASSEE 32304

As environmentally-related projects continue to grow, it becomes increasingly important that communication ties be established between projects. Post-secondary environmental education is beginning to emerge as a major emphasis in Florida. As such, it is important that community-based and university-based educators cooperate to see that the task of citizen environmental education is accomplished.

This "incomplete" directory is the first crucial step in establishing a functional communication network among Florida's post-secondary environmental educators. I hope it will live through many revisions and continue performing its communication role.

The Environmental Education Project at Florida State University deserves a big "THANKS" for performing a much needed and difficult task--producing this "incomplete" directory.

C. Richard Tillis, Director
Office of Environmental Education

STATE UNIVERSITY SYSTEM OF FLORIDA
107 W. Gaines Street, Tallahassee, Florida 32304

June 2, 1977

Environmental Education is alive and well in Florida's Institutions of Higher Education. This Directory, produced by a project at Florida State University, funded through Title I of the Higher Education Act, represents the kind of innovative, high quality programs sponsored by Florida's Universities and Community Colleges.

As our concern about environmental issues, including energy, pollution and population continues to grow, our universities and community colleges will respond accordingly. Florida's post-secondary educational resources represent a tremendous problem-solving force that has the ability to deal directly with emerging social concerns.

This Directory inventories many of the resources that are available in conjunction with post-secondary based programs. It represents another way that higher education serves Floridians.

John Scott Dailey
State Coordinator
Title I HEA

AN AFFIRMATIVE ACTION – EQUAL OPPORTUNITY EMPLOYER

University of Florida Gainesville • Florida State University Tallahassee • Florida A. & M. University Tallahassee • University of South Florida Tampa • Florida Atlantic University Boca Raton
University of West Florida • Florida Technological University • University of North Florida • Florida International University

INTRODUCTION

There is no such thing as a complete directory. Directories by their very nature are static creatures capable of tremendous change in a short period of time. And no matter how careful compilers attempt to be, projects and people are always overlooked. In view of the constraint of time and dollars, we readily admit that this is an incomplete product.

But there is hope. If we missed your project or environmental center, let us know. The Environmental Education Project is currently searching for funds to revise and reprint this incomplete directory. Your additions and corrections will be reflected in the revised, incomplete edition!

Rodney F. Allen
David E. LaHart
Tallahassee
June 1977

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John Scott Dailey

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Florida Technological University

Florida Atlantic University

Florida International University

Appendix

Location of "on campus"

Environmental Study Areas

Environmental Education Coordinators

State University System

Coordinator, Environmental Education
Board of Regents
Collins Building
Tallahassee, Florida 32304
(904) 488-4384

Dean Charles Divita
Division of Continuing Education
Florida International University
Miami, Florida

Dr. Rodney Allen
College of Education
Florida State University
Tallahassee, Florida

Dr. Ronald Newell, Director
Division of Continuing Education
Florida Technological University
Orlando, Florida

Dr. Ed Steiner
Collegecof Education
University of South Florida
Tampa, Florida

Mr. Harold S. Jenkins
Director of Continuing Education
Florida A & M University
Tallahassee, Florida

Dr. Herman C. Kranzer
Professor of Science Education
University of West Florida
Pensacola, Florida

Dean Robert Mitchell
Division of Continuing Education
University of North Florida
Jacksonville, Florida

Dr. Ray Iverson
Professor of Biological Sciences
Florida Atlantic University

Dr. Richard Palmer
Director, TREEO Center
University of Florida
Gainesville, Florida

ENVIRONMENTAL EDUCATION
ADVISORY COUNCIL

CHAIRMAN

The Honorable D. Robert Graham
The Florida Senate
14420 Northwest 60 Avenue
Miami Lakes, Florida 33014

The Honorable Warren S. Henderson
The Florida Senate
P. O. Box 3888
Sarasota, Florida 33578
(813) 958-2338

Representative William R. Conway
Florida House of Representatives
116 Banyan Drive
Ormond Beach, Florida 32074
(904) 255-6804

Mr. Chris Jensen
Florida Petroleum Council
111 North Gadsden Street
Tallahassee, Florida 32304
(904) 222-0220

Dr. O. E. Frye, Jr.
Director
Florida Game and Freshwater
Fish Commission
Bryant Building
Tallahassee, Florida 32304
(904) 488-2975

Mrs. Carla Palmer
Environmental Education Director
Florida Audubon Society
P. O. Drawer 7
Maitland, Florida 32751
(305) 647-2615

Mr. John C. Jones
Executive Director
Florida Wildlife Federation
4080 North Haverhill Road
West Palm Beach, Florida 33407
(305) 683-2328

Mr. William Hammond
Environmental Education Center
2266 Second Street
Fort Myers, Florida 33901
(813) 334-1983

Mr. Jay Landers, Jr.
Secretary, Department of Environmental
Regulations
2562 Executive Center Circle East
Montgomery Building
Tallahassee, Florida 32301
(904) 488-4807

Dr. Wynn F. Updyke
University of Florida
Health Education Department
Gainesville, Florida 32611
(904) 392-3261

Mr. John E. Stefany
Florida Association of the American
Institute of Architects
102 Whiting Street
Tampa, Florida 33602
(813) 228-7721

Mrs. Marjorie H. Carr
Box 388
Micanopy, Florida 32667

Mr. Arthur Godfrey *
Production
59 East 54 Street
Suite 81
New York City, New York 10022
(212) 593-1487

Dr. Donald Dunlop
Vice President
Florida Power and Light, Inc.
P. O. Box 3100
Miami, Florida 33101
(305) 374-5365

* Non-participating honorary member

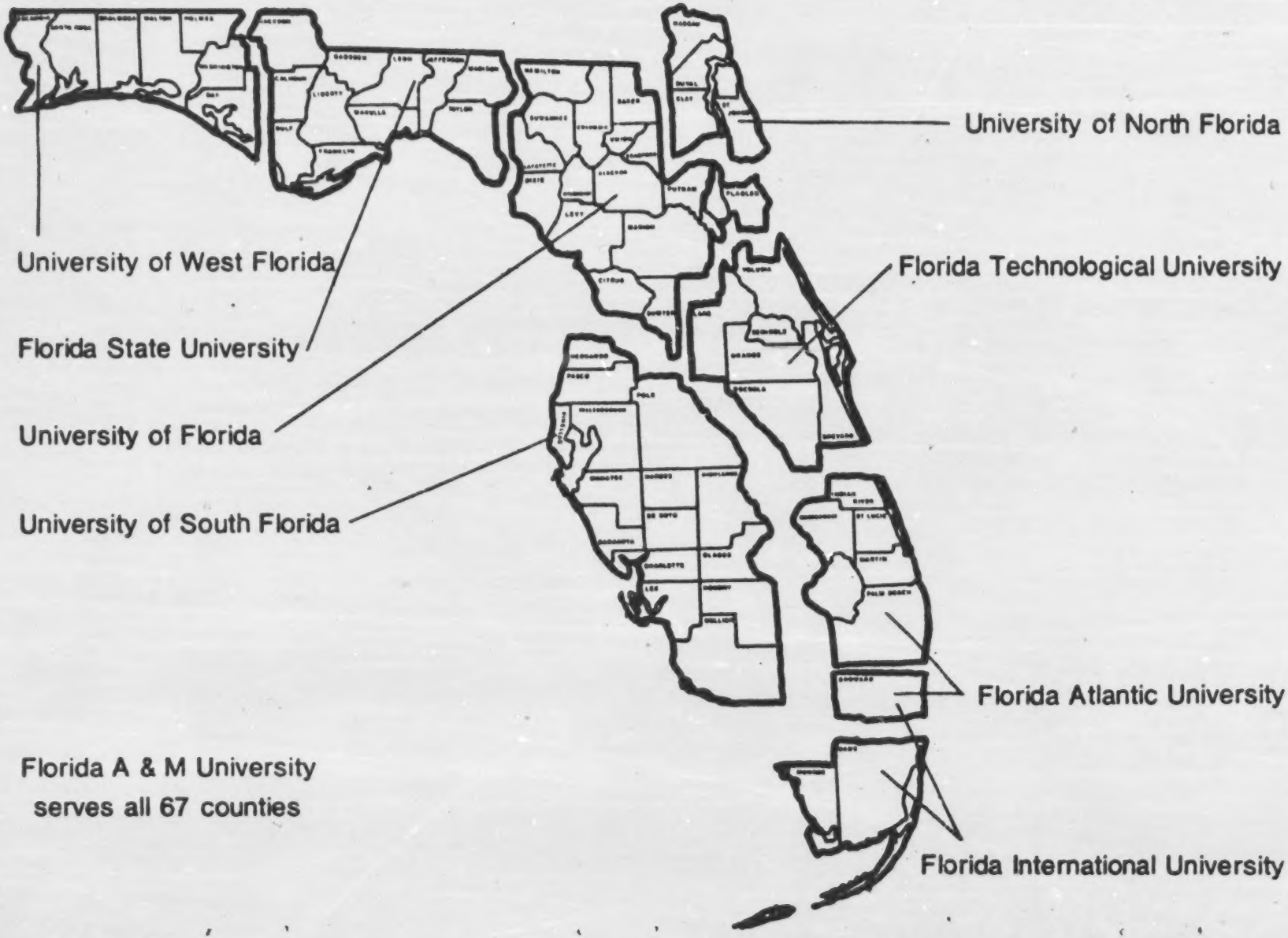
Coordinator, Environmental Education
Board of Regents
Collins Building
Tallahassee, Florida 32304
(904) 488-4384

Mrs. Aquilina Howell
Director of Secondary Education
Leon County Schools
P. O. Box 246
Tallahassee, Florida 32302
(904) 576-8111

Dr. Herman C. Dranzer
Professor of Science Education
University of West Florida
Pensacola, Florida 32504
(904) 476-9500 ext. 497

Mr. Robin Lewis
Professor of Biology
Hillsborough Community College
P. O. Box 22127
Tampa, Florida 33622
(813) 879-7222 ext. 397

Continuing Education Credit Course Service Areas for the State University System of Florida



Florida A & M University
serves all 67 counties

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

University of West Florida

NAME OF FACILITY:

Blackwater River Environmental Center

ADDRESS:

Division of Forestry
Route 1 Box 77
Milton, FL 32570

DIRECTOR/CONTACT PERSON:

Forest Supervisor
(904) 957-4111

FACILITY AND PROGRAM DESCRIPTION:

Location: On the Blackwater River about six miles north of Holt, Florida within the Blackwater River State Forest. The Blackwater River Environmental Center has a residential facility with dormitories, dining hall and teaching pavilion for up to 60 persons attending overnight or longer environmental study activities. The 900-acre outdoor study area provides a living demonstration of the northwestern Florida's forest ecosystem with river, pond, flood plain hardwoods and upland pine/wiregrass plant communities.

The Florida Division of Forestry conducts a series of week-long summer programs of environmental activities for Florida school students during June and July.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

University of West Florida

NAME OF FACILITY:

Environmental Studies Center

ADDRESS:

207 East Main Street
Pensacola, Florida 32501

DIRECTOR/CONTACT PERSON:

Roy Hyatt
(904) 438-1140

FACILITY AND PROGRAM DESCRIPTION:

The museum building contains a library, collections and changing displays. Laboratory facilities are available for research.

The museum program centers around the natural and social history of the Pensacola area. Field trips to Gulf Island National Seashore can be arranged.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

University of West Florida

NAME OF FACILITY:

Pine Log Environmental Center

ADDRESS:

Division of Forestry
715 W. 15 Street
Panama City 32401

DIRECTOR/CONTACT PERSON:

District Forester
(904) 763-6589

FACILITY AND PROGRAM DESCRIPTION:

Location: On Pine Log Creek near Florida Highway 79 about 25 miles northwest of Panama City, Florida, within the Pine Log State Forest. The Pine Log Environmental Center provides day-use environmental study facilities as well as an individual/group camping area for overnight or longer environmental study sessions. The study area provides a living demonstration of the Florida panhandle coastal plain's ecosystem, with stream and marsh, flood plain hardwood and sandhill pineland plant communities.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

University of West Florida

NAME OF FACILITY:

We have two instructional nature trails which illustrate several different plant communities on campus.

ADDRESS:

University of West Florida
Pensacola, FL 32504

DIRECTOR/CONTACT PERSON:

Mrs. Pat Riddle or other in Info Services
(904) 476-9500 ext. 226

FACILITY AND PROGRAM DESCRIPTION:

The Baars-Firestone Nature Trail is adjacent to the front entrance of our campus. A text is available in the University bookstore, downstairs of the library, or texts can be borrowed from Security Bldg. 19. The trail illustrates Mesic Hammock vegetation and Sand hill vegetation as well as some Appalachian disjuncts. Numbered stations on the trail correlates with the text.

The Edward Ball nature trail winds around Thompson's Bayou and is an elevated boardwalk with benches. Animal life is especially abundant. Lion's Club funds have allowed us to plan this trail for the Blind and tape cassettes with a guided tour are available from University Security. An illustrated guide for this trail is available from the bookstore.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

Florida State University

NAME OF FACILITY:

N.F.J.C. Outdoor Environmental Center

ADDRESS:

North Florida Junior College
Madison, FL 32340

DIRECTOR/CONTACT PERSON:

Barry A. Barnhart
(904) 973-2288 ext. 33

FACILITY AND PROGRAM DESCRIPTION:

20 acres; 4 trails (1 1/2 miles) include the following habitats, swamp, lake, stream, mixed conifer-hardwood habitats, and secondary succession on an abandoned logging road and a fill dirt excavation area. Contains a central picnic area, 4 units each with a picnic table, trash barrel, and grill; one unit with shelter. No camping, hunting, fishing, or running water.

Operated as Environmental Study area for grades K-12 and junior college. The K-12 curriculum will be plugged into the center as the exercises are requested by teachers. The center is reserved by groups, both educational and civic, by calling the Science Department at N.F.J.C. Monday-Friday between 8-12 and 1-3 p.m. Guided tours can be arranged by contacting the director.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

Florida State University

NAME OF FACILITY:

Tallahassee Junior Museum

ADDRESS:

3945 Museum Drive
Tallahassee, FL 32304

DIRECTOR/CONTACT PERSON:

Sam W. Kates, Director
John Madden, Coordinator of Education
(904) 576-1636

FACILITY AND PROGRAM DESCRIPTION:

52 acre site includes nature trails, natural animal habitats exhibiting live Florida wildlife, various natural science exhibits, 1880's pioneer farm in operation, restored historical buildings include school house, church, plantation house, country store, and grist mill.

Environmental education program includes field classes in Florida wildlife, reptiles, plants and trees and swamp life. Special classes can be arranged to meet needs of teachers. Classes are also available in Florida pioneer history. All classes are activity oriented. Admission and class fees are waivered for Leon County public schools. Private and out-of-county schools pay $1.50 for adults, 50¢ for students plus 15¢ per child if a class is included.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

Florida State University

NAME OF FACILITY:

Trout Pond Interpretive Area

ADDRESS:

District Ranger
U.S. Forest Service P. O. Box 68
Crawfordville, FL 32327

DIRECTOR/CONTACT PERSON:

Larry Ford
(904) 222-9549

FACILITY AND PROGRAM DESCRIPTION:

Trout Pond Recreation Area is located 12 miles south of Tallahassee in the Apalachicola National Forest. This recreation area was designed and built for handicapped persons and their families. Present facilities consist of 15 picnic tables, a shelter, a swimming pool with spray pools and sunscreen, toilet facilities, fishing pier and 3,500 feet of paved trail.

These facilities have been designed to accommodate handicapped individuals and groups, also educational groups from school systems. The interpretive area consists of a 700-foot long paved trail and four paved interpretive areas. At each of these areas is a push button and loud speaker. These are connected to an automatic recycling visitor-operated tape recorder to present a message. There are also exhibits, wood samples and items for students to manipulate.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

University of North Florida

NAME OF FACILITY:

Jacksonville Children's Museum Inc.

ADDRESS:

1025 Gulf Life Drive
Jacksonville, FL 32207

DIRECTOR/CONTACT PERSON:

Doris L. Whitmore
(904) 396-7061

FACILITY AND PROGRAM DESCRIPTION:

Located in downtown Jacksonville, this facility has large display areas and interpretive areas for environmental education.

Program description not available.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

University of North Florida

NAME OF FACILITY:

Marine Science Education Center

ADDRESS:

1347 Palmer Street
Mayport, Florida 32233

DIRECTOR/CONTACT PERSON:

George E. Mann, Principal
(904) 246-2733

FACILITY AND PROGRAM DESCRIPTION:

The Marine Science Center is located near the St. John's River and the Atlantic Ocean. Originally funded through a Title IV grant, Duval County Schools currently support the educational program. In addition to conducting a variety of programs at the Center, the staff also visits schools on a regular basis.

Activities include collecting trips to the St. John's marshes and boat trips. The staff is available to make presentations before groups and community leaders.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

University of North Florida

NAME OF FACILITY:

S. Bryan Jennings Environmental Center

ADDRESS:

Division of Forestry
8719 W. Beaver
Jacksonville, FL 32220

DIRECTOR/CONTACT PERSON:

District Forester
(904) 781-1434

FACILITY AND PROGRAM DESCRIPTION:

Location: In the pine flatwoods near U. S. Highway 301 about 7 miles north of Baldwin, Florida, within the Cary State Forest. The S. Bryan Jennings Environmental Center provides day-use environmental study facilities with an adjacent group camping area for overnight or longer environmental study sessions. The study area provides living demonstrations of the northeastern Florida flatwood's ecosystem with pine flatwoods, cypress hammock, bay head and marsh plant communities.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

University of Florida

NAME OF FACILITY:

Florida State Museum

ADDRESS:

University of Florida
Gainesville, FL 32611

DIRECTOR/CONTACT PERSON:

Dr. J. C. Dickinson, Jr.
Vincent J. Garianelli, Dept. of Interpretation
(904) 392-1721

FACILITY AND PROGRAM DESCRIPTION:

The museum moved into its new facilities on campus in 1974.

The programs are variable and many are available upon request. Museum tours can always be arranged for groups.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

University of Florida

NAME OF FACILITY:

Marine Science Center

ADDRESS:

P. O. Box 1258
Crystal River, FL 32629

DIRECTOR/CONTACT PERSON:

Patrick Purcell
(904) 795-4393

FACILITY AND PROGRAM DESCRIPTION:

The Marine Science Center is located on the interface of a fresh water marsh and estuary. The center has laboratory facilities, museum collections and live collections.

The major portions of the program are to explore various marine habitats found in the area. Special programs can be conducted for groups if arrangements are made.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

University of Florida

NAME OF FACILITY:

Santa Fe Community College

ADDRESS:

P. O. Box 1530
Gainesville, Florida 32602

DIRECTOR/CONTACT PERSON:

Carol Blalock
(904) 377-5161

FACILITY AND PROGRAM DESCRIPTION:

The Santa Fe Community College Environmental Education Project is using sound/slide presentations coupled with television interviews to bring environmental information to Florida citizens. The 21 programs currently under development deal with the problems of increased population and decisions which might alter the environment for years to come. The Title I HEA Grant supports Santa Fe Communtity College as a disseminator of relevant information to those citizens most directly affected by existing conditions.

Programs available include:
Understanding the Natural Environment: Paynes Prairie, River Rise/Oleno State Park, San Felasco Hammock, Devils Millhopper State Geological Site, Exotic Plants, Florida Snakes, Florida Birds, Florida Fossils, Florida Wildflowers, Natural Springs.

Understanding Population Related Problems: Air Pollution, Florida Water, A Visit to a Water Treatment Plant, Noise Pollution, Solid Waste, Recycling Glass and Paper, Environmental Recreation, Passive Energy Homes, A Trip to a Power Plant, Solar Energy, Nuclear Energy.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

Florida Technological University

NAME OF FACILITY:

Bicentennial Youth Park

ADDRESS:

School Board of Volusia Co.
230 N. Stone Street
DeLand, FL 32720

DIRECTOR/CONTACT PERSON:

Paul D. Bishop, Manager/Naturalist
(904) 734-7190

FACILITY AND PROGRAM DESCRIPTION:

a 200-acre area composed of pine flatwoods and cypress wetlands being equipped with a stilt structure interpretive center, catwalks, nature trails, and campsites.

An interdisciplinary educational program designed to familiarize the student with the out-of-doors and its many natural aspects and phenomena. This program is designed primarily for K-12 grades in Volusia County schools only.

This project is currently in the developmental stage and is not at this time open to the public.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

Florida Technological University

NAME OF FACILITY:

Brevard County Wildlife and Nature Study Center

ADDRESS:

Located on Wickham Road at I-95
Mailing Address: Instructional Services Offices
1274 South Florida Avenue
Rockledge, Florida 32955

DIRECTOR/CONTACT PERSON:

Carlton O. Teate, Director
(305) 259-2511

FACILITY AND PROGRAM DESCRIPTION:

Three miles of developed foot paths through wooded areas, around marshes and into clearings, thus affording visitors the opportunity to study a wide variety of wildlife and vegetation. On the grounds there is a museum of Florida natural history and Environmental Science displays. There is also an auditorium that seats up to 120 persons where environmental film programs are shown. There is a petting zoo and nearby a picnic lunch area. There are cold drink machines and snack machine in the lunch area.

School groups are taken on guided tours. There are four trails, which are as follows: Bunny Trail (Kindergarten age through third grade and those who are handicapped), Fox Trail (Fourth, Fifth, and Sixth Grades), Pelican Trail (Middle School age students and adults). At the present, the Center offers 58 specific educational programs for the audio-visual portion of the tour. Another part of the tour is the museum where the Environmental Guide gives a history of mounted reptiles, birds, animals, insects, butterflies and the Hicks Seashell collection.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

University of Florida

NAME OF FACILITY:

Camp Kiwanis

ADDRESS:

Rt. 1 Box 609
Silver Springs, FL 32688

DIRECTOR/CONTACT PERSON:

at facility - John Bogart (904) 236-2620
County - Wiley Kerlin

FACILITY AND PROGRAM DESCRIPTION:

13 acre site leased from U.S. Forest on Mill Dam Lake with dormitories to house 100 people and kitchen facilities. A portable classroom is on the site.

Specialized program for adult groups are available by request. Current adult programs include in-service teacher training, environmental leadership programs and use of the "Thumbs-up Ecology Program."

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

Florida Technological University

NAME OF FACILITY:

Environmental Education Center

ADDRESS:

434 North Tampa Avenue
P. O. Box 271
Orlando, Florida 32802

DIRECTOR/CONTACT PERSON:

Charles R. Sheppard, Environmental Specialist
(305) 628-0995

FACILITY AND PROGRAM DESCRIPTION:

The facility is located at Mead Gardens in Winter Park, Florida. The 55 acre park has picnic shelters, 3 ponds, a stream, greenhouses, an amphi-theater, nature trails, and a small building for the Environmental Education Center. There are three distinct ecological communities which participants visit and study through a variety of learning activities. The environmental center building has a laboratory set up to demonstrate food chains.

We have a community based program. It is sponsored by the Junior League of Orlando, the city of Winter Park, and the School Board of Orange County. Each day a class of 4th, 5th, or 6th grade children comes to Mead Gardens to experience ecology first hand. Each group experiences a high ground community (oak-pine-grass), a pond community, a wet-land community (bayhead) and a food-chain laboratory. After the field-trip, the participants evaluate their learning experience for our records. These evaluations are the basis for program improvements.

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INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

Florida Technological University

NAME OF FACILITY:

Howey Educational Center

ADDRESS:

P. O. Box 427
Howey In The Hills, Florida 32737

DIRECTOR/CONTACT PERSON:

Robert C. Mish
Environmental Education Instructor
(904) 324-3624

FACILITY AND PROGRAM DESCRIPTION:

The science facility includes an environmental sciences laboratory-classroom, a planetarium, a nature trail encompassing five (5) biotic communities, a eutrophic lake, aboretum and preparation and work storage areas. The staff for the science resource center consists of two full-time instructors.

The center offers flexible interdisciplinary programs which vitalize, enrich, and complement content areas of the school curriculum. Emphasis in environmental education is placed on aquatic studies, value classification, field ecology and environmental games for younger children. Special programs are available for adult groups by request.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

Florida Technological University

NAME OF FACILITY:

Mountain Lake Sanctuary

ADDRESS:

P. O. Box 268
Lake Wales, FL 33853

DIRECTOR/CONTACT PERSON:

Kenneth D. Morrison
(813) 676-1355

FACILITY AND PROGRAM DESCRIPTION:

This beautiful sanctuary boasts gardens and nature trails through a carefully preserved central Florida area.

Programs vary with the group.

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INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

Florida Technological University

NAME OF FACILITY:

Seminole Environmental Studies Center

ADDRESS:

Bettie Palmer
315 Maple Avenue
Sanford, Florida 32771

DIRECTOR/CONTACT PERSON:

Bettie J. Palmer (305) 323-4220
315 Maple Avenue
Sanford, FL 32771

FACILITY AND PROGRAM DESCRIPTION:

The Center is located in a 246 acre park owned by Seminole County. It is slowly being developed into a general Environmental Studies Center with nature trails, boardwalks, study sites, and a center building to house a resource area, teaching area, wet lab and storage area. The Seminole County District School Board has entered into a legal agreement to operate the environmental studies program in this beautiful preserve on Lake Jessup.

The Environmental Studies program for 1977-78 will be geared primarily toward the 5th grades of our Elementary Schools but will be open for use by the public as requested. Two comprehensive program guides have been developed specifically for elementary & middle school students' use at the Center. The future programs planned for the center include community and special interest areas, as well as special education programs.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

University of South Florida

NAME OF FACILITY:

The John A. Anderson Environmental Education Center at Sawgrass Lake Park

ADDRESS:

Largo Curriculum and Instruction Center
205 - 4th Street SW
Largo, FL 33540

DIRECTOR/CONTACT PERSON:

Joseph T. Maier, Resource Teacher
Environmental Education
Largo Curriculum and Instruction Center

FACILITY AND PROGRAM DESCRIPTION:

The Sawgrass Lake area is made up of a 250 acre Maple Swamp, a 50 acre Oak Hammock, several small tracts of Oak Groves and a 30+ acre lake. An education center is under construction that will have lab and lecture areas. Approximately 1 mile of boardwalks and several thousand feet of trails and walkways will also be constructed. The buildings, boardwalks, etc. will be accessible to the handicapped.

The school system is responsible for all program development. Programs, booklets and other materials must be prepared for the general public as well as the school children. Pre and post-trip activities will be a part of the total program. The program will be extended to include students K-12 as well as adults.

The pilot project activities were carried out in an Oak Grove and at a pond called the Living Lake. The investigations were interdisciplinary in nature and included fundamental skills in such areas as reading, writing, arithmetic, English and art. A copy of the pilot project activities has been filed with the Office of Environmental Education.

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INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

University of South Florida

NAME OF FACILITY:

Dunedin Nature Center

ADDRESS:

903 Michigan Blvd.
Dunedin, FL 33528

DIRECTOR/CONTACT PERSON:

Linda Hensley
(813) 733-1849 or 733-4151 x 271

FACILITY AND PROGRAM DESCRIPTION:

Program is centered in an old home which provides classroom and laboratory space as well as office space. Outdoor exercises make use of an 85 acre tract of city park that has been set aside as a state natural feature.

The goals of the program are to provide a classroom extension program in environmental studies for upper Pinellas County schools, as well as workshops for community groups of all ages.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

University of South Florida

NAME OF FACILITY:

Hillsborough Community College's Environmental Studies Center at Cockroach Bay

ADDRESS:

P. O. Box 22127
Tampa, Florida 33622

DIRECTOR/CONTACT PERSON:

Fred Webb, Supervisor
Dorothea Cole, Program Biologist
(813) 879-7222, Ext. 308

FACILITY AND PROGRAM DESCRIPTION:

The 20 acres of land adjacent to a mangrove estuary system provides an ideal atmosphere for field-oriented environmental education. Several marine and shoreline terrestrial communities are available for various activities. Physical facilities include laboratory-classroom buildings, boardwalks, boats, and miles of nature trails. Appropriate lab and field equipment is available to facilitate the learning process. A reference library of both specimens and printed material is ever increasing.

The Environmental Studies Center is under the auspices of Hillsborough Community College and is open to junior high through adult classes, individuals, and private and civic organizations. Field activities are emphasized and geared to the specific interests and/or age level of the group.

One day field trips include water testing; studying and sampling various communities (e.g. sea grass and algae flats, benthos, plankton); investigating food chains and surveying the local marine plants and animals; and discussions of marine ecology. Terrestrial trips include identifying plant communities (e.g. Sabal palm thicket, hammock, salt marsh, mangrove) and dominant species making up those communities; measuring physical parameters; soil testing; identifying poisonous, edible, and exotic species; and discussions of terrestrial ecology.

Other programs sponsored by the Environmental Studies Center include teacher workshops, slide presentations to civic and community groups, and conferences on the restoration of coastal vegetation.

The Environmental Studies Center is a community based project and has received enthusiastic support. Through cooperation and donations, individuals and organizations have demonstrated their interest in and the necessity of an environmental education center in the Tampa Bay area.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

University of South Florida

NAME OF FACILITY:

Instructional Materials Center

ADDRESS:

College of Education, EDU 100
University of South Florida
Tampa, FL 33620

DIRECTOR/CONTACT PERSON:

Mrs. Mary Sullivan, Director
(813) 974-2100

FACILITY AND PROGRAM DESCRIPTION:

Library of resource material available to university students and staff for study in the Center or for checking out.

Materials for teaching grades K-12.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

University of South Florida

NAME OF FACILITY:

Lee County Environmental Education Center/Nature Center
Junior Museum and Planetarium

ADDRESS:

Ortiz Avenue
P. O. Box 2166
Ft. Myers, FL 33902

DIRECTOR/CONTACT PERSON:

William F. Hammond
(813) 334-1983 or 332-2206

FACILITY AND PROGRAM DESCRIPTION:

The land is a Ft. Myers City Park the building built by the non-profit corporation. The Lee County Junior Museum and Planetarium and all program is developed and implemented by the Lee County Schools Environmental Education staff. The facility is located on a 105 acre site covered with pine flatwoods and cypress with a cypress/flag pond. There is more than a mile of interpretive boardwalks and trail through the site.

The center buildings house interpretive exhibits, the offices of the Lee County Schools Environmental Education staff, classrooms, animal care and rehabilitation project area, picnic facilities, a native plant landscape project garden, and both a gift shop and a wood shop.

An old Florida church has been moved to the site and is presently being renovated as a large meeting room/classroom, caretaker's apartment and kitchen facility.

A K-adult formal environmental education program has been developed by the Lee County schools and integrated into the basic studies programs within the school system. New curriculum in E.E. is continually being developed and implemented. The E.E. Center has developed formal instructional field trips into the community and to the center using innovative techniques. Staff development-teacher and community volunteer training programs are conducted regularly. Audio visual programs are also produced at the Center for school and community use.

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INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

University of South Florida

NAME OF FACILITY:

Nature's Classroom

ADDRESS:

Rt. 1 Box 396
Thonotosassa, FL 33592

DIRECTOR/CONTACT PERSON:

Henry Verges
(813) 986-1867

FACILITY AND PROGRAM DESCRIPTION:

365 acres on the Hillsborough River including interpretive science room with aquarium/museum and a native animal zoo are part of Nature's Classroom. Dormitory facilities are also available.

The program is primarily oriented to the Hillsborough sixth grade, but the facilities can be used for other purposes with special arrangement.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

University of South Florida

NAME OF FACILITY:

Withlacoochee Environmental Center

ADDRESS:

Division of Forestry
7235 U.S. 41 North
Brooksville, 33512

DIRECTOR/CONTACT PERSON:

Forest Supervisor
(904) 796-4958

FACILITY AND PROGRAM DESCRIPTION:

Location: Near Lake McKethan off U.S. Highway 41 about 7 miles north of Brooksville, Florida, within the Headquarters Tract of the Withlacoochee State Forest. The Withlacoochee Environmental Center has a residential facility with dormitories, dining hall and teaching pavilion for up to 96 persons attending overnight or longer environmental study activities. The 600-acre outdoor study area provides a living demonstration of the central Florida rolling hills ecosystem with lake, pond, intermittent marsh/prairie, hardwood and pine upland plant communities.

The Florida Division of Forestry conducts a series of week-long summer programs of environmental activities for Florida school students during June, July and August.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

Florida Atlantic University

NAME OF FACILITY:

Hobe Sound Nature Center

ADDRESS:

U.S. Fish and Wildlife Service
Hobe Sound, Florida

DIRECTOR/CONTACT PERSON:

Clyde Lee
(305) 546-6141

FACILITY AND PROGRAM DESCRIPTION:

Converted motel with a classroom and chairs and a small collection. There is also a nature trail.

Program varies according to the needs of the group.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

NAME OF FACILITY:

Florida Atlantic University

Marine Sciences Under Sails

ADDRESS:

P. O. Box 3994
Hollywood, Florida 33023

DIRECTOR/CONTACT PERSON:

Ned Webster, Director (305) 983-7015
Alison Rand, Assistant Director

FACILITY AND PROGRAM DESCRIPTION:

The MSUS program is carried out entirely aboard cruising size sailing craft. Each sailboat carries four to six participants in addition to the skipper/ instructors.

The Marine Sciences Under Sails program is an association of teachers, other interested adults and sailboat owners who wish to share available resources to make possible marine study cruises into various islands of the Caribbean Sea. One objective is to expose educators and adult students to many facets of what the sea has to teach us...and to have fun while experiencing them.

We emphasize marine science as the core of our program, but we also include studies associated with the art of cruising aboard sailing craft. Everyone by necessity is directly involved in all facets of operating the boat and getting along with the sea.

Another objective is to be a non-profit, educational organization providing low cost educational experiences for teachers and adult students.

Adventure is another objective. We believe that real adventure has an undefinable influence on the human mind which might be an ingredient in short supply in our modern mechanized society.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

Florida Atlantic University

NAME OF FACILITY:

Martin County Schools' Environmental Studies Center

ADDRESS:

2900 N.E. Indian River Drive
Jensen Beach, FL 33457

DIRECTOR/CONTACT PERSON:

Jay Jarrett
(305) 334-1262

FACILITY AND PROGRAM DESCRIPTION:

Former elementary school; 3 classroom-labs; wet lab; museum; offices; 30-foot survey boat; 5 acre site on Indian River lagoon.

Various adult evening lecture series, courses in environmental study and related fields, ecology-oriented field trips, slide/tape instructional units on local environmental concerns, etc.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

Florida International University

NAME OF FACILITY:

Newfound Harbor Marine Institute

ADDRESS:

Route 1 Box 170
Big Pine Key, FL 33043

DIRECTOR/CONTACT PERSON:

Irene Hooper, Executive Director
(305) 872-2331

FACILITY AND PROGRAM DESCRIPTION:

Tropical Marine Environmental Education Center
We are capable of providing program and room & board for groups up to 120 persons.

We offer primarily field-oriented programs, taking groups of about 15 persons to a variety of sites (coral reefs, mangrove islands, grass flats, hardwood hammocks, algal communities, etc.) where we present instruction in Biology, Geology, Oceanography, Ecology and Botany appropriate to the level of students and length of time of their stay.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

Florida Atlantic University

NAME OF FACILITY:

Pine Jog Environmental Sciences Center

ADDRESS:

6301 Summit Blvd.
West Palm Beach, Florida 33406

DIRECTOR/CONTACT PERSON:

Dr. Ray M. Iverson (305) 395-5100 X2726
or contact any staff member at (305) 686-6600

FACILITY AND PROGRAM DESCRIPTION:

150 acres of pine/palmetto flatwoods with meadow, pond, marsh, oak/palm hammock and old pond bottoms. Buildings include auditorium (cap. 80), classroom, workroom, library, offices, darkroom and partial kitchen. Parking for 50 cars, can handle buses.

When appropriate activities are handled at parks, beaches and estuary sites open to the public.

Short general interest courses for adults (e.g. six 2-hour evening classes, 1 Saturday field trip), guided weekend trips, talks to community groups, morning art classes, weekend workshops for teachers and leaders of student groups (Scouts).

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

Florida International University

NAME OF FACILITY:

Castellow Hammock Environmental Education Center

ADDRESS:

22301 Southwest 162 Avenue, Route 1, Goulds, Florida 33170

DIRECTOR/CONTACT PERSON:

Ms. Sally Black, Director
(305) 245-4321

FACILITY AND PROGRAM DESCRIPTION:

50 acre wooded tract containing tropical hardwood hammock and overgrown pineland with one main nature trail about 7/8 mile long. 10 acre open area containing native tree arboretum (in beginning stages), picnic shelter, picnic tables and grills, parking for 16 cars and bus parking. Nature center building with office, small nature library (room use only), meeting room about 20' x 30' and one 15' x 2'1/2' display case. Restrooms and water fountain, no drink or snack machines. Live animal exhibits are maintained in meeting room.

Regularly scheduled guided nature walks and walks by request are conducted. 2 special programs are offered a month for adults and/or family groups. One is usually of an outing nature (canoe trip, hike, bike hike) and one of a class or workshop type. Programs that have been offered are: Edible wild plant workshop - identification, habitat, methods of cooking plants, w/booklet, $3 fee; Intro S. Florida Flora - 5 session class; bird identification class; raptor workshop - identification, habitat, habits of birds of prey; Basic canoeing - 6 sessions leading to Red Cross certification, fee; Snakes of South Florida workshop; Bee keeping workshop - How to set up a hive; Dyeing with Plants; Wood carving; Stars of the fall sky; Camping Show - Consumer info. and product displays of self-propelled camping equipment. Talks on poisonous plants, native plants for landscaping and bird and night walks.

INVENTORY OF POST-SECONDARY ENVIRONMENTAL EDUCATION RESOURCES - 1977

CONTINUING EDUCATION REGION

Florida International University

NAME OF FACILITY:

Interpretive Section, Dade County Park and Recreation Department

ADDRESS:

50 S. W. 32 Road
Miami, Florida 33129

DIRECTOR/CONTACT PERSON:

Mr. Jim King, Chief Naturalist
(305) 854-3530

FACILITY AND PROGRAM DESCRIPTION:

The Interpretive Section is responsible for nature programming in the Regional County Parks, Recreation Centers, and special program areas (ex. Schools, Scouts, and civic groups). The present staff size consists of one full-time naturalist and five part-time naturalists.

Naturalists conduct guided nature walks through the natural areas of the Regional County Parks to any organized group of ten or more and to the general public on special walks. Natural history lectures are given to any organized group of twenty-five or more by reservation. The naturalist acts as a resource guide with teachers in the development of environmental education programs in the Dade County schools. Special after school programs are conducted in the recreation centers along with workshops, classes, and training sessions for interested participants. The naturalist conducts leisure recreation activities in special program areas such as canoeing, hiking, and shallow water snorkeling. During the summer months, a structured nature program is taken to the recreation centers for all aged groups. Other program activities includes a "Junior Naturalist Program" held twice a month for interested children ages 9 - 14 years. A newsletter entitled, "Tropical Trails" is available to the public by subscription.

APPENDIX I

ENVIRONMENTAL STUDY AREAS

ON-SCHOOL SITES

OFFICE OF ENVIRONMENTAL EDUCATION

ENVIRONMENTAL STUDY AREAS
ON-SCHOOL SITE LIST

January, 1977

COUNTY	NAME OF SCHOOL	CONTACT PERSON & ADDRESS
ALACHUA	Glen Springs Elementary	Janet Koons 2826 N.W. 23rd Boulevard Gainesville, FL 32601
	J. J. Finley Elementary	Karen Schmeling 1912 N.W. 5th Avenue Gainesville, FL 32601
	Lake Forest Elementary	Cleo Abbott & Louis Dunbar 427 S.E. 43rd Street Gainesville, FL 32601
	Littlewood Elementary	Christine Clark 812 N.W. 34th Street Gainesville, FL 32601
BAKER	Westside Elementary	Ronnie Kirkland Glen St. Mary, FL 32040
BRADFORD	Bradford High Bradford Middle Starke Elementary	Jerry McGriff Bradford High Starke, FL 32091
	Brooker Elementary	Phillip Vellenga Brooker, FL 32622
	Southside Elementary	Lynn Stevens Starke, FL 32091
BREVARD	Apollo Elementary	Robert Champaigne 3751 Knox McRae Road Titusville, FL 32780
CALHOUN	Carr Elementary	Darryl Taylor Clarksville, FL 32430
CITRUS	Crystal River Elementary	John Headlee 1507 West Main Street Inverness, FL 32065
CLAY	Orange Park High	Walter L. Brock Orange Park, FL 32073
COLLIER	Immokalee Middle	David F. Boulder 508 North 9th Street Immokalee, FL 33939

COUNTY	NAME OF SCHOOL	CONTACT PERSON & ADDRESS
COLUMBIA	Eastside Elementary	Norman Steadman 225 Defender Avenue Lake City, FL 32055
	Kindergarten Center	Earl Watts West Leon Street Lake City, FL 32055
	Summers Elementary	Lucy Lane McFarlane Avenue Lake City, FL 32055
DADE	Highland Oaks Elementary	Virginia A. Boone 20500 N.E. 24th Avenue Miami, FL 33160
	Redland Junior High	Dr. Ralph L. Hall 16001 S.W. 24th Street Miami, Florida 33030
DIXIE	James H. Anderson Elementary	Lloyd Jones Cross City, FL 32628
DUVAL	Arlington Heights Elementary	Dorothy Overmier 1520 Sprinkle Drive Jacksonville, FL 32211
	Joseph Finnegan Elementary	Sandra Ewing & Pamela Sanders 555 Wonderwood Drive Atlantic Beach, FL 32233
	Bayview Elementary	Eula Lee 3257 Lake Shore Blvd. Jacksonville, FL 32210
GLADES	Moore Haven Elementary	Neil M. Grey Post Office Box 160 Moore Haven, FL 33471
HERNANDO	Brooksville Junior High	Dan Kanynck Kelly Street Brooksville, FL 33512
	Eastside Elementary	Charles Campbell Hill-N-Dale Brooksville, FL 33512
	Westside Elementary	Mary Gray 715 Applegate Drive Spring Hill, FL 33512
HIGHLANDS	Fred Wild Elementary	James Bible Route 2, Box 85 Sebring, FL 33870

COUNTY	NAME OF SCHOOL	CONTACT PERSON & ADDRESS
HILLSBOROUGH	Robles Elementary	Mrs. J. Simmons 4405 E. Sligh Avenue Tampa, FL 33610
HOLMES	Prosperity Elementary	Daniel W. Padgett Route 2 Westville, FL 32464
INDIAN RIVER	Beachland Elementary	Janet Kohler 3351 Mockingbird Drive Vero Beach, FL 32960
	Citrus Elementary	Joy H. Orth 2771 Citrus Road Vero Beach, FL 32960
	Rosewood Elementary	Ruth Troutman 3850 16th Street Vero Beach, FL 32960
	Osceola Elementary	Roy Howard 645 20th Street Vero Beach, FL 32960
JACKSON	Cottondale Elementary	Virginia D. Braxton Cottondale Elementary Cottondale, FL 32431
	Grand Ridge	Virginia Blount Grand Ridge School Grand Ridge, FL 32442
	Sunland Center	Kenneth Stoutamire Sunland Center Marianna, FL 32446
JEFFERSON	Howard Middle School	George W. Pittman Box 368 Monticello, FL 32344
	Jefferson County Elementary	Carol C. Arnold Box 308 Monticello, FL 32344
LAKE	Tavares Elementary	Mary Verhagen Tavares, FL 32778
	Triangle Elementary	Evelyn Linger Mt. Dora, FL 32757
LEE	Bayshore Elementary	Carol King William Road N. Ft. Myers, FL 33903

COUNTY	NAME OF SCHOOL	CONTACT PERSON & ADDRESS
LEE (Cont'd)	Bonita Springs Middle	Robert Durham Dean Street Bonita Springs, FL 32923
	Caloosa Elementary	JoAnne Parrott 610 Del Prado Parkway Cape Coral, FL 33904
	Cape Elementary	John Morgan Box 577 Cape Coral, FL 33904
	Cypress Lake Middle	Sharon Durham Cypress Lake Drive Ft. Myers, FL 33901
	Edison Park Elementary	Barbara Hamilton 2480 Euclid Avenue Ft. Myers, FL 33901
	Ft. Myers Beach Elementary	Charles M. Conley 2751 Oak Street Ft. Myers, FL 33931
	Fort Myers High	Barbara Shafer 2635 Cortez Boulevard Fort Myers, FL 33901
	Heights Elementary	Thomas Halgrim Route 3, Box 550 Ft. Myers, FL 33901
	Lee Middle	Jane Francis Leone 4203 Ballard Road Ft. Myers, FL 33901
	North Ft. Myers High	Maceo S. Pickett Orange Grove Boulevard N. Ft. Myers, FL 33903
	Orangewood Elementary	Walter Zuroski 4001 Delon Ft. Myers, FL 33901
	Riverdale High	Bonnie Hill Route 7, Box 650 Ft. Myers, FL 33905
	Riverside for Trainable Mentally Retarded	Greg Gehringer 1634 Manchester Drive Ft. Myers, FL 33901
	Suncoast Elementary	Steve McCullough 1856 Suncoast Lane, N.E. N. Fort Myers, FL 33903

COUNTY	NAME OF SCHOOL	CONTACT PERSON & ADDRESS
LEE (Cont'd)	Villas Elementary	Myra J. Baxter 8595 Beacon Boulevard Ft. Myers, FL 33901
	Tanglewood Elementary	Paul C. Ley 1620 Manchester Drive Ft. Myers, FL 33901
	Tropic Isles Elementary	Ernest E. Powers Orange Grove Boulevard N. Ft. Myers, FL 33903
	J. Colin English Elementary	Richard L. Ivill 120 Pine Island Road N. Ft. Myers, FL 33903
	Allen Park Elementary	Joseph A. Beavo 3345 Canelo Drive Ft. Myers, FL 33901
	Alva Middle	Charles L. Watson Box 278 Alva, FL 33920
	Cypress Lake High	Roger R. Jones Panther Lane Ft. Myers, FL 33901
	Dunbar Middle	Robert J. Shank 3800 E. Edison Avenue Ft. Myers, FL 33901
	Fort Myers Middle	Frank H. Bieber 3015 Central Avenue Ft. Myers, FL 33901
	Lehigh Acres Elementary	Elizabeth B. Ratliff 200 Schoolway Court Lehigh Acres, FL 33936
	Orange River Elementary	Richard M. Herring 250 Queens Road Ft. Myers, FL 33905
	Sanibel Elementary	Shirley D. Watson 3840 Sanibel/Captiva Rd. Sanibel Island, FL 33957
	Suncoast Middle	Ida S. Baker 1856 Suncoast Lane, N.E. N. Fort Myers, FL 33903
LEON	John G. Riley Elementary	Luther Williams 1400 Indiana Street Tallahassee, FL 32304

COUNTY	NAME OF SCHOOL	CONTACT PERSON & ADDRESS
LEON (Cont'd)	Lillian Reudiger Elementary	Sam Alderman 526 West 10th Avenue Tallahassee, FL 32303
LEVY	Yankeetown School	Ken Watts Yankeetown, FL 32698
MADISON	N. Fla. Junior College Campus	Barry Barnhart Turner Davis Drive Madison, FL 32340
MARTIN	Hobe Sound Elementary	C. B. Brooks Route 1, Box 477 Hobe Sound, FL 33455
	Stuart Middle	Wilbur George 575 Georgia Avenue Stuart, FL 33494
MONROE	Reynolds School	Betty Cox Post Office Drawer 1430 Key West, FL 33040
	Stanley Switlik Elementary	Betty Cox Post Office Drawer 1430 Key West, FL 33040
OKALOOSA	Baker High School	James Bayette Baker, FL 32531
	New Heights Elementary	Dr. Philip Cummings Post Office Box 1432 Ft. Walton Beach, FL 32548
ORANGE	Lake Sybelia Elementary	Fred Smith 600 Sandspur Road Maitland, FL 32751
	Edgewater High	Bob Smith 3100 Edgewater Drive Orlando, FL 32804
	Walker Junior High	Lynda Wilson 150 Amidon Lane Orlando, FL 32809
	Union Park Junior High	Cleveland Hendry 1844 Westfall Drive Orlando, FL 32807
OSCEOLA	Highlands Elementary	Charles Bryan West Donegan Avenue Kissimmee, FL 32741
	Michigan Avenue Elementary	Eugene Adams South Michigan Avenue St. Cloud, FL 32769

COUNTY	NAME OF SCHOOL	CONTACT PERSON & ADDRESS
PALM BEACH	Allamanda Elementary	Ralph M. Powell 10300 Allamanda Drive Lake Park, FL 33403
	Canal Point Elementary	Kathryn E. Cunningham Lake Shore Drive Canal Point, FL 33438
	Hagen Road Elementary	James Wiggins 10439 Hagen Road Lake Worth, FL 33460
	Jupiter Elementary	Dr. James G. Daniels Route 2, Loxahatcher Dr. Jupiter, FL 33458
PASCO	Cox Elementary	Richard Endress 201 West Main Street Dade City, FL 33525
	Land O'Lakes Jr-Sr High	Dennis J. Niles Route 2, Box 2610 Land O'Lakes, FL 33539
PINELLAS	Clearwater High	William Blyshak Marion Steele Pam Oswald Helen Wilcox 540 South Hercules Clearwater, FL 33516
POLK	Combee Elementary	L. H. Poorbauch Morgan Combee Road Lakeland, FL 33801
	Riverside Elementary	Martha Sue Brantley 810 N.E. 6th Street Ft. Meade, FL 33841
PUTNAM	Interlachen Community	Kathryn M. Beard Interlachen, FL 32048
ST. JOHNS	Julington Creek	Sara McDaniel Box 45C, Route 6 Jacksonville, FL 32217
	Millcreek Elementary	Fredic Allen Route 2, Box 308 St. Augustine, FL 32084
	Murray 7th Grade Center	A. M. Jones Post Office Box 456 Holmes Boulevard St. Augustine, FL 32084

COUNTY	NAME OF SCHOOL	CONTACT PERSON & ADDRESS
ST. JOHNS (Cont'd)	Webster 6th Grade Center	John Jackson Post Office Box 529 Evergreen Street St. Augustine, FL 32084
SARASOTA	Gardens Elementary	Joan Ewing 700 Center Road Venice, FL 33595
SEMINOLE	Jackson Heights Middle	Phillip Perrault Box 128 Oviedo, Florida 32765
	Idyllwilde Elementary	Richard M. Herndon Vihlen Road Sanford, FL 32771
	Eastbrook Elementary	Frances Walton Tangerine Avenue Winter Park, FL 32789
	Red Bug Elementary	James NeVille Casselberry, FL 32707
	Spring Lake Elementary	Ernest L. Prater Altamonte Springs, FL 32701
	Longwood Elementary	Ann Wright Longwood, FL 32750
	T. W. Lawton Elementary	Morris Ruby Box 758 Oviedo, FL 32765
	Goldsboro Elementary	Eugene E. Williams 1301 West 16th Street Sanford, FL 32771
	Lyman High	Carlton Henley Longwood, FL 32750
	Lake Mary Elementary	Marlene Williams Box 163 Lake Mary, FL 32746
	Lakeview Middle	Ted Barker Sanford, FL 32771
	Winter Springs Elementary	Wynn Pickelsimer Winter Springs, FL 32707
	Lake Orienta Elementary	Jewel Morgan Maitland, FL 32751

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Seminole (Cont'd)	Rosenwald Exceptional Student Center	Betty Palmer 315 Maple Avenue Sanford, FL 32771
	Southside Elementary	Shirley Heinzelman 1401 Magnolia Sanford, FL 32771
TAYLOR	Taylor County Junior High	Doris Basnar 318 Clark Street Perry, FL 32347
UNION	Lake Butler Elementary	Martha C. Riherd 800 S. W. 6th Street Lake Butler, FL 32054
	Union County High	Marie Woodley 1000 South Lake Avenue Lake Butler, FL 32054
VOLUSIA	Chisholm 7th Grade Center	Mary C. Eikum 557 Ronnoc Lane New Smyrna Beach, FL 32069

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ENVIRONMENTAL EDUCATION COUNTY CONTACTS
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HILLSBOROUGH	Nancy Marsh	707 E. Columbus Drive Tampa 33601	(813) 228-8666
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ENVIRONMENTAL EDUCATION COUNTY CONTACTS
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MONROE	Betty Cox	1105 Leon Street, Rear Key West 33040	(305) 294-1379
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